



US005801059A

United States Patent [19]

Smith et al.

[11] **Patent Number:** **5,801,059**[45] **Date of Patent:** **Sep. 1, 1998**[54] **METHOD FOR DETECTING TOTAL
KETONE BODIES IN URINE**

5,510,245 4/1996 Magers 436/63

[75] Inventors: **Jack V. Smith**, St. Petersburg; **Jesse M.
Carter**, Tampa, both of Fla.*Primary Examiner*—Lyle A. Alexander*Attorney, Agent, or Firm*—Larson & Larson, P.A.; Herbert
W. Larson[73] Assignee: **Chimera Research & Chemical, Inc.**,
Largo, Fla.[57] **ABSTRACT**[21] Appl. No.: **616,479**[22] Filed: **Mar. 19, 1996****Related U.S. Application Data**[60] Division of Ser. No. 429,292, Apr. 24, 1995, Pat. No.
5,516,700, which is a continuation-in-part of Ser. No.
68,956, May 28, 1993, abandoned.[51] **Int. Cl.⁶** **G01N 33/493**[52] **U.S. Cl.** **436/128; 436/164; 436/48**[58] **Field of Search** 436/128, 904,
436/164, 43, 48, 49

Aliquot of a urine sample is placed in a first automated analyzer sampling cup and a known standard is placed in a second cup. The urine sample and standard are transferred to separate cuvettes and at least one reagent composition in an aqueous medium is injected into the cuvette. The reagent composition contains a compound to remove substances in the urine interfering with a calorimetric reaction, a compound to convert B-hydroxybutyric acid in the urine to acetoacetic acid in the presence of nicotinamide adenine dinucleotide and reading at a specified wavelength to determine quantitatively the total ketone bodies in the patient's urine.

[56] **References Cited****U.S. PATENT DOCUMENTS**

5,326,697 7/1994 Magers 436/128

8 Claims, No Drawings